

com\BankersAlgo.java

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1  import java.util.Scanner;
2
3  public class BankersAlgo {
4      public static void main(String[] args) {
5          Scanner cin = new Scanner(System.in);
6          System.out.println("Enter number of processes : ");
7          int n = cin.nextInt(), count = 0;
8          boolean[] finish = new boolean[n];
9          System.out.println("Enter number of resources : ");
10         int m = cin.nextInt();
11         int[][] allocation = new int[n][m];
12         int[][] max = new int[n][m];
13         int[][] need = new int[n][m];
14         int[] avail = new int[m];
15         int[] sq = new int[n];
16         System.out.println("Enter number of Instances or resources available for resourcej");
17         for (int i = 0; i < m; i++) {
18             System.out.print("Enter available of resources" + (i + 1) + " : ");
19             avail[i] = cin.nextInt();
20         }
21         System.out.println("Enter resources already allocated for each process ");
22         for (int i = 0; i < n; i++) {
23             finish[i] = false;
24             for (int j = 0; j < m; j++) {
25                 System.out
26                     .print("Enter resources" + (j + 1) + " already allocated for process " + (i + 1) + " : ");
27                 allocation[i][j] = cin.nextInt();
28             }
29         }
30         System.out.println("Enter Maximum instances of each resources required for each process");
31         for (int i = 0; i < n; i++) {
32             for (int j = 0; j < m; j++) {
33                 System.out
34                     .print("Enter Max resources" + (j + 1) + " required for process " + (i + 1) + " : ");
35                 max[i][j] = cin.nextInt();
36                 need[i][j] = max[i][j] - allocation[i][j];
37             }
38         }
39         while (count != n) {
40             for (int i = 0; i < n; i++) {
41                 boolean y = false;
42                 if (finish[i] == false) {
43                     for (int j = 0; j < m; j++) {
44                         if (need[i][j] <= avail[j])
45                             continue;
46                         else {
47                             y = true;
48                             break;
49                         }
50                     }
51                     if (y == false) {
52                         for (int j = 0; j < m; j++)
53                             avail[j] += need[i][j];
54                         finish[i] = true;
55                         sq[count] = i;
56                         count++;
57                     }
58                 }
59             }
60         }
61         System.out.print("Safe sequece : ");
62         for (int i = 0; i < n; i++)
63             System.out.print("p" + sq[i] + " ");
64         cin.close();
65     }
66 }
67
68 }
```